A. CLASSIFICATION OF SUBJECT MATTER IPC 7 G01N33/68 C12Q1/68

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) $I\,PC\,\,7\,\,\,G01N\,\,\,C12Q$

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, BIOSIS, EMBASE, MEDLINE, CHEM ABS Data

C. DOCUME	ENTS CONSIDERED TO BE RELEVANT		<u> </u>	
Category *	Citation of document, with indication, where appropriate, of the re	elevant passages	Relevant to claim No.	
Y	GILPIN B J ET AL: "A novel, secreted form of human ADAM 12 (Meltrin alpha) provokes myogenesis in vivo" JOURNAL OF BIOLOGICAL CHEMISTRY, AMERICAN SOCIETY OF BIOLOGICAL CHEMISTS, BALTIMORE, MD, US, vol. 273, no. 1, 2 January 1998 (1998-01-02), pages 157-166, XP002229017 ISSN: 0021-9258 cited in the application page 157, left-hand column, line 1 page 157, right-hand column, last paragraph - page 158, left-hand column, paragraph 1 page 165, left-hand column, paragraph 2		1,4, 6-10,13, 14	
		-/	l	
X Furth	ner documents are listed in the continuation of box C.	X Patent family members are listed	in annex.	
° Special cal	tegories of cited documents:	"T" later document published after the inte	emational filing date	
consid	ent defining the general state of the art which is not ered to be of particular relevance	or priority date and not in conflict with cited to understand the principle or th invention	the application but learly underlying the	
 "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means 		"X" document of particular relevance; the claimed invention cannot be considered novel or carnot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the		
		document is combined with one or m ments, such combination being obvio	ore other such docu-	
"P" docume later th	nt published prior to the international filing date but an the priority date claimed	in the art. "&" document member of the same patent	family	
Date of the a	actual completion of the international search	Date of mailing of the international sea	arch report	
6	January 2005	0 1 04 2005		
Name and m	nalling address of the ISA	Authorized officer		
	European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Marttin, E		

3

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/011632

		FC1/EF2004/011032
	ation) DOCUMENTS CONSIDERED TO BE RELEVANT	Polyment to a fair No
Category °	Citation of document, with Indication, where appropriate, of the relevant passages	Relevant to daim No.
Х	WO 03/020220 A (PROCACCIO VINCENT; WALLACE DOUGLAS C (US); KERSTANN KEITH (US); LEVY) 13 March 2003 (2003-03-13) claim 2; sequence 290	15-17
Υ	KOLBEN M ET AL: "Proteases and their inhibitors are indicative in gestational disease." EUROPEAN JOURNAL OF OBSTETRICS, GYNECOLOGY, AND REPRODUCTIVE BIOLOGY. IRELAND SEP 1996, vol. 68, no. 1-2, September 1996 (1996-09), pages 59-65, XP002272282 ISSN: 0301-2115 page 63, left-hand column, line 12 - line 15 page 64, left-hand column, line 23 - line 25 page 64, left-hand column, line 43 - line 49	1,4, 6-10,13, 14
Y	US 2003/170627 A1 (WONG SOPHIA LI-MING ET AL) 11 September 2003 (2003-09-11)	1,4, 6-10,13, 14
A	page 1, paragraph 3 - paragraph 5 page 4, paragraph 45 page 10, paragraph 111 page 11, paragraph 118	15-19,24
Y	MASANORI ASAKURA ET AL: "Cardiac hypertrophy is inhibited by antagonism of ADAM12 processing of HB- EGF: Metalloproteinase inhibitors as a new therapy" NATURE MEDICINE, NATURE AMERICA, NEW YORK, US, vol. 8, no. 1, January 2002 (2002-01), pages 35-40, XP002965243 ISSN: 1078-8956	1,4, 6-10,13, 14
A	page 35, right-hand column, line 8 - line 9	15-19,24
Y	PANG Z J ET AL: "Expression profile of trophoblast invasion-associated genes in the pre-eclamptic placenta." BRITISH JOURNAL OF BIOMEDICAL SCIENCE. ENGLAND 2003, vol. 60, no. 2, September 2003 (2003-09), pages 97-101, XP002272487 ISSN: 0967-4845 the whole document	1,4, 6-10,13, 14

3

INTERIATIONAL SEARCH REPORT

International Application No
PCT/EP2004/011632

		PCT/EP200	4/011032
	ation) DOCUMENTS CONSIDERED TO BE RELEVANT		Delements alates 11
Category *	Citation of document, with indication, where appropriate, of the relevant passages		Relevant to claim No.
A	DATABASE WPI Section Ch, Week 198715 Derwent Publications Ltd., London, GB; Class B04, AN 1987-106528 XP002272283 & SU 1 250 257 A (MOSC SECOND MED INS) 15 August 1986 (1986-08-15) abstract		1,4, 6-10, 13-19,24
A	WO 99/46597 A (DIAGNOSTIC SYSTEMS LAB INC) 16 September 1999 (1999-09-16) page 8, line 22 - page 9, line 2; claims 17,18; example 5		1,4, 6-10, 13-19,24
A	LEACH R E ET AL: "Pre-eclampsia and expression of heparin-binding EGF-like growth factor" LANCET, XX, XX, vol. 360, no. 9341, 19 October 2002 (2002-10-19), pages 1215-1219, XP004388635 ISSN: 0140-6736 page 1218, left-hand column, line 13 - right-hand column, line 22		1,4, 6-10, 13-19,24
P,X	US 2004/002467 A1 (DOBIE KENNETH W ET AL) 1 January 2004 (2004-01-01) paragraphs [0010] - [0015], [0031]		15,16

International application No. PCT/EP2004/011632

INTERNATIONAL SEARCH REPORT

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)
This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:
1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
2. Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)
This International Searching Authority found multiple inventions in this international application, as follows:
see additional sheet
As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
As only some of the required additional search fees were timely paid by the applicant, this international Search Report covers only those claims for which fees were paid, specifically claims Nos.:
No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.: 1, 6-8, 18, 19, 24 (completely); 4, 9-10, 10-17, 24 (partially)
Remark on Protest The additional search fees were accompanied by the applicant's protest. No protest accompanied the payment of additional search fees.

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1, 4 in part, 6-8, 9-10 in part, 13-17 in part, 18, 19, 24 in part

Use of ADAM 12 protein or a nucleic acid molecule comprising a nucleic acid with a sequence of ADAM 12 for diagnosis of preeclampsia or a related syndrome; or a method for diagnosis of preeclampsia or a related syndrome comprising: i) bringing a biopsy or bodily fluid sample in contact with a nucleic acid molecule comprising a nucleic acid with a sequence of ADAM 12, and ii) detecting the binding of the nucleic acid: or the use of a nucleic acid molecule comprising a nucleic acid with a sequence of ADAM 12 for the manufacture of a diagnostic for the diagnosis of preeclampsia or a related syndrome; or a diagnostic or a diagnostic kit containing a nucleic acid molecule comprising a nucleic acid with a sequence of ADAM 12; or use of a nucleic acid molecule with a sequence of ADAM 12 for the manufacture of a medicament for the treatment of preeclampsia or a related syndrome.

2. claims: 2-5 in part, 9-10 in part, 11, 12, 13-17 in part, 20-28 in part

Use of a ligand binding specifically to ADAM 12 for diagnosis of preeclampsia or related syndrome; or a method for the identification of ligands binding specifically to ADAM 12 comprising contacting ADAM 12 with at least one candidate for a ligand, and ii) measuring the binding of the candidate for a ligand to ADAM 12; or a method for diagnosis of preeclampsia or a related syndrome comprising: i) bringing a biopsy or bodily fluid sample in contact with a specifically binding ligand to ADAM 12 and ii) detecting the binding of ligand; or the use of a ligand binding to ADAM 12 for the manufacture of a diagnostic for the diagnosis of preeclampsia or a related syndrome; or a diagnostic or a diagnostic kit containing a ligand binding to ADAM 12; or use of an inhibitor of the biological activity ADAM 12 for the manufacture of a medicament for the treatment of preeclampsia or a related syndrome; or use of ADAM 12 for the identification of an inhibitor of ADAM 12; a method for identification of an inhibitor of the biological activity of ADAM 12 comprising: i) contacting ADAM 12 with a suitable substrate, and ii) measuring the decrease in processing of the substrate in the presence as compared to the absence of a candidate for an inhibitor molecule; a method for the preparation of a pharmaceutical composition wherein an inhibitor of ADAM 12 synthesized in adequate amounts, and formulated into a pharmaceutical composition. Wherein the ligand or inhibitor is a disintegrin domain metalloproteinase inhibitors, in particular KB-R7785 or a derivative thereof.

3. claims: 2-5 in part, 9-17 in part, 20-28 in part

Use of a ligand binding specifically to ADAM 12 for diagnosis of preeclampsia or related syndrome; or a method for the identification of ligands binding specifically to ADAM 12 comprising contacting ADAM 12 with at least one candidate for a ligand, and ii) measuring the binding of the candidate for a ligand to ADAM 12; or a method for diagnosis of preeclampsia or a related syndrome comprising: i) bringing a biopsy or bodily fluid sample in contact with a specifically binding ligand to ADAM 12 and ii) detecting the binding of ligand; or the use of a ligand binding to ADAM 12 for the manufacture of a diagnostic for the diagnosis of preeclampsia or a related syndrome; or a diagnostic or a diagnostic kit containing a ligand binding to ADAM 12; or use of an inhibitor of the biological activity ADAM 12 for the manufacture of a medicament for the treatment of preeclampsia or a related syndrome; or use of ADAM 12 for the identification of an inhibitor of ADAM 12; a method for identification of an inhibitor of the biological activity of ADAM 12 comprising: i) contacting ADAM 12 with a suitable substrate, and ii) measuring the decrease in processing of the substrate in the presence as compared to the absence of a candidate for an inhibitor molecule; a method for the preparation of a pharmaceutical composition wherein an inhibitor of ADAM 12 synthesized in adequate amounts, and formulated into a pharmaceutical composition. Wherein the ligand or inhibitor is a TIMP, in particular TIMP-1, TIMP-2, or TIMP-3.

4. claims: 2-5 in part, 9-17 in part, 20 in part, 21 in part, 23-28 in part

Use of a ligand binding specifically to ADAM 12 for diagnosis of preeclampsia or related syndrome; or a method for the identification of ligands binding specifically to ADAM 12 comprising contacting ADAM 12 with at least one candidate for a ligand, and ii) measuring the binding of the candidate for a ligand to ADAM 12; or a method for diagnosis of preeclampsia or a related syndrome comprising: i) bringing a biopsy or bodily fluid sample in contact with a specifically binding ligand to ADAM 12 and ii) detecting the binding of ligand; or the use of a ligand binding to ADAM 12 for the manufacture of a diagnostic for the diagnosis of preeclampsia or a related syndrome; or a diagnostic or a diagnostic kit containing a ligand binding to ADAM 12. Wherein the ligand is IGFBP-3 or IGFBP-5.

Use of a ligand binding specifically to ADAM 12 for diagnosis of preeclampsia or related syndrome; or a method for the identification of ligands binding specifically to ADAM 12 comprising contacting ADAM 12 with at least one candidate for a ligand, and ii) measuring the binding of the candidate for a ligand to ADAM 12; or a method for diagnosis of preeclampsia or a related syndrome comprising: i) bringing a biopsy or bodily fluid sample in contact with a specifically binding ligand to ADAM 12 and ii) detecting the binding of ligand; or the use of a ligand binding to ADAM 12 for the manufacture of a diagnostic for the diagnosis of preeclampsia or a related syndrome; or a diagnostic or a diagnostic kit containing a ligand binding to ADAM 12. Wherein the ligand is HB-EGF.

6. claims: 2-5 in part, 9-17 in part, 20-28 in part

Use of a ligand binding specifically to ADAM 12 for diagnosis of preeclampsia or related syndrome; or a method for the identification of ligands binding specifically to ADAM 12 comprising contacting ADAM 12 with at least one candidate for a ligand, and ii) measuring the binding of the candidate for a ligand to ADAM 12; or a method for diagnosis of preeclampsia or a related syndrome comprising: i) bringing a biopsy or bodily fluid sample in contact with a specifically binding ligand to ADAM 12 and ii) detecting the binding of ligand; or the use of a ligand binding to ADAM 12 for the manufacture of a diagnostic for the diagnosis of preeclampsia or a related syndrome; or a diagnostic or a diagnostic kit containing a ligand binding to ADAM 12; or use of an inhibitor of the biological activity ADAM 12 for the manufacture of a medicament for the treatment of preeclampsia or a related syndrome; or use of ADAM 12 for the identification of an inhibitor of ADAM 12; a method for identification of an inhibitor of the biological activity of ADAM 12 comprising: i) contacting ADAM 12 with a suitable substrate, and ii) measuring the decrease in processing of the substrate in the presence as compared to the absence of a candidate for an inhibitor molecule; a method for the preparation of a pharmaceutical composition wherein an inhibitor of ADAM 12 synthesized in adequate amounts, and formulated into a pharmaceutical composition. Wherein the ligand or inhibitor is alpha2-macroglobulin.

Use of a ligand binding specifically to ADAM 12 for diagnosis of preeclampsia or related syndrome; or a method for the identification of ligands binding specifically to ADAM 12 comprising contacting ADAM 12 with at least one candidate for a ligand, and ii) measuring the binding of the candidate for a ligand to ADAM 12; or a method for diagnosis of preeclampsia or a related syndrome comprising: i) bringing a biopsy or bodily fluid sample in contact with a specifically binding ligand to ADAM 12 and ii) detecting the binding of ligand; or the use of a ligand binding to ADAM 12 for the manufacture of a diagnostic for the diagnosis of preeclampsia or a related syndrome; or a diagnostic or a diagnostic kit containing a ligand binding to ADAM 12. Wherein the ligand is PKC-delta.

8. claims: 2-5 in part, 9-17 in part, 20 in part, 21 in part, 23-28 in part

Use of a ligand binding specifically to ADAM 12 for diagnosis of preeclampsia or related syndrome; or a method for the identification of ligands binding specifically to ADAM 12 comprising contacting ADAM 12 with at least one candidate for a ligand, and ii) measuring the binding of the candidate for a ligand to ADAM 12; or a method for diagnosis of preeclampsia or a related syndrome comprising: i) bringing a biopsy or bodily fluid sample in contact with a specifically binding ligand to ADAM 12 and ii) detecting the binding of ligand; or the use of a ligand binding to ADAM 12 for the manufacture of a diagnostic for the diagnosis of preeclampsia or a related syndrome; or a diagnostic or a diagnostic kit containing a ligand binding to ADAM 12. Wherein the ligand is alpha-actinin or alpha-actinin-2.

9. claims: 2-5 in part, 9-17 in part, 20 in part, 21 in part, 23-28 in part

Use of a ligand binding specifically to ADAM 12 for diagnosis of preeclampsia or related syndrome; or a method for the identification of ligands binding specifically to ADAM 12 comprising contacting ADAM 12 with at least one candidate for a ligand, and ii) measuring the binding of the candidate for a ligand to ADAM 12; or a method for diagnosis of preeclampsia or a related syndrome comprising: i) bringing a biopsy or bodily fluid sample in contact with a specifically binding ligand to ADAM 12 and ii) detecting the binding of ligand; or the use of a ligand binding to ADAM 12 for the manufacture of a diagnostic for the diagnosis of preeclampsia or a related syndrome; or a diagnostic or a diagnostic kit containing a ligand binding to ADAM 12. Wherein the ligand is src.

10. claims: 2-5 in part, 9-17 in part, 20 in part, 21 in part, 23-28 in part

Use of a ligand binding specifically to ADAM 12 for diagnosis of preeclampsia or related syndrome; or a method for the identification of ligands binding specifically to ADAM 12 comprising contacting ADAM 12 with at least one candidate for a ligand, and ii) measuring the binding of the candidate for a ligand to ADAM 12; or a method for diagnosis of preeclampsia or a related syndrome comprising: i) bringing a biopsy or bodily fluid sample in contact with a specifically binding ligand to ADAM 12 and ii) detecting the binding of ligand; or the use of a ligand binding to ADAM 12 for the manufacture of a diagnostic for the diagnosis of preeclampsia or a related syndrome; or a diagnostic or a diagnostic kit containing a ligand binding to ADAM 12. Wherein the ligand is Grb-2.

11. claims: 2-5 in part, 9-17 in part, 20 in part, 21 in part, 23-28 in part

Use of a ligand binding specifically to ADAM 12 for diagnosis of preeclampsia or related syndrome; or a method for the identification of ligands binding specifically to ADAM 12 comprising contacting ADAM 12 with at least one candidate for a ligand, and ii) measuring the binding of the candidate for a ligand to ADAM 12; or a method for diagnosis of preeclampsia or a related syndrome comprising: i) bringing a biopsy or bodily fluid sample in contact with a specifically binding ligand to ADAM 12 and ii) detecting the binding of ligand; or the use of a ligand binding to ADAM 12 for the manufacture of a diagnostic for the diagnosis of preeclampsia or a related syndrome; or a diagnostic or a diagnostic kit containing a ligand binding to ADAM 12. Wherein the ligand is syndecan-4.

12. claims: 2-5 in part, 9-17 in part, 20-28 in part

Use of a ligand binding specifically to ADAM 12 for diagnosis of preeclampsia or related syndrome; or a method for the identification of ligands binding specifically to ADAM 12 comprising contacting ADAM 12 with at least one candidate for a ligand, and ii) measuring the binding of the candidate for a ligand to ADAM 12; or a method for diagnosis of preeclampsia or a related syndrome comprising: i) bringing a biopsy or bodily fluid sample in contact with a specifically binding ligand to ADAM 12 and ii) detecting the binding of ligand; or the use of a ligand binding to ADAM 12 for the manufacture of a diagnostic for the diagnosis of preeclampsia or a related syndrome; or a diagnostic or a diagnostic kit containing a ligand binding to ADAM 12; or use of an inhibitor of the biological activity ADAM 12 for the manufacture of a medicament for the treatment of preeclampsia or a related syndrome; or use of ADAM 12 for the identification of an inhibitor of ADAM 12; a method for identification of an inhibitor of the biological activity of ADAM 12 comprising: i) contacting ADAM 12 with a suitable substrate, and ii) measuring the decrease in processing of the substrate in the presence as compared to the absence of a candidate for an inhibitor molecule; a method for the preparation of a pharmaceutical composition wherein an inhibitor of ADAM 12 synthesized in adequate amounts, and formulated into a pharmaceutical composition. Wherein the ligand or inhibitor is an antibody, or the ligand is a nucleic acid or protein aptamer.

Use of a ligand binding specifically to ADAM 12 for diagnosis of preeclampsia or related syndrome; or a method for the identification of ligands binding specifically to ADAM 12 comprising contacting ADAM 12 with at least one candidate for a ligand, and ii) measuring the binding of the candidate for a ligand to ADAM 12; or a method for diagnosis of preeclampsia or a related syndrome comprising: i) bringing a biopsy or bodily fluid sample in contact with a specifically binding ligand to ADAM 12 and ii) detecting the binding of ligand: or the use of a ligand binding to ADAM 12 for the manufacture of a diagnostic for the diagnosis of preeclampsia or a related syndrome; or a diagnostic or a diagnostic kit containing a ligand binding to ADAM 12; or use of an inhibitor of the biological activity ADAM 12 for the manufacture of a medicament for the treatment of preeclampsia or a related syndrome; or use of ADAM 12 for the identification of an inhibitor of ADAM 12; a method for identification of an inhibitor of the biological activity of ADAM 12 comprising: i) contacting ADAM 12 with a suitable substrate, and ii) measuring the decrease in processing of the substrate in the presence as compared to the absence of a candidate for an inhibitor molecule: a method for the preparation of a pharmaceutical composition wherein an inhibitor of ADAM 12 synthesized in adequate amounts, and formulated into a pharmaceutical composition. Wherein the ligand or inhibitor is P-LAP.

Use of a ligand binding specifically to ADAM 12 for diagnosis of preeclampsia or related syndrome; or a method for the identification of ligands binding specifically to ADAM 12 comprising contacting ADAM 12 with at least one candidate for a ligand, and ii) measuring the binding of the candidate for a ligand to ADAM 12; or a method for diagnosis of preeclampsia or a related syndrome comprising: i) bringing a biopsy or bodily fluid sample in contact with a specifically binding ligand to ADAM 12 and ii) detecting the binding of ligand; or the use of a ligand binding to ADAM 12 for the manufacture of a diagnostic for the diagnosis of preeclampsia or a related syndrome; or a diagnostic or a diagnostic kit containing a ligand binding to ADAM 12; or use of an inhibitor of the biological activity ADAM 12 for the manufacture of a medicament for the treatment of preeclampsia or a related syndrome; or use of ADAM 12 for the identification of an inhibitor of ADAM 12 a method for identification of an inhibitor of the biological activity of ADAM 12 comprising: i) contacting ADAM 12 with a suitable substrate, and ii) measuring the decrease in processing of the substrate in the presence as compared to the absence of a candidate for an inhibitor molecule; a method for the preparation of a pharmaceutical composition wherein an inhibitor of ADAM 12 synthesized in adequate amounts, and formulated into a pharmaceutical composition. Wherein the ligand or inhibitor is not comprised in the

above-mentioned subjects 1-13.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No PCT/EP2004/011632

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 03020220 A	13-03-2003	CA 2459061 A1 EP 1432823 A2 WO 03020220 A2 CA 2356540 A1	13-03-2003 30-06-2004 13-03-2003 28-02-2003
US 2003170627 A	11-09-2003	NONE	
SU 1250257 A	15-08-1986	SU 1250257 A1	15-08-1986
WO 9946597 A	16-09-1999	US 6248546 B1 AU 760099 B2 AU 2996599 A CA 2323450 A1 EP 1070255 A1 NZ 507400 A RU 2206897 C2 WO 9946597 A1	19-06-2001 08-05-2003 27-09-1999 16-09-1999 24-01-2001 29-08-2003 20-06-2003 16-09-1999
US 2004002467 A	01-01-2004	NONE	